

### **REMARKS**

This Application has been carefully reviewed in light of the Office Action dated February 23, 2009 ("*Office Action*"). In the Office Action, Claims 1-8 are pending and rejected. Applicants have amended Claims 1-8 and adds new Claims 9-20. Applicants submit that no new matter is added by these amendments. Applicants respectfully request reconsideration and favorable action in this case.

### **Interview Summary**

Applicants thank the Examiner for conducting the telephone interview on February 13, 2009, and for the thoughtful consideration of this case. During the telephone interview, Applicants and Examiner discussed the claimed subject matter as relating to the detailed description. It is Applicants' understanding that no agreement was reached with regard to the patentability of the claims.

### **Claim Objections**

The *Office Action* rejects Claims 2-3 and 6-7 due to informalities. Applicants have amended Claims 2-3 and 6-7 to address the issues identified by the Examiner. Applicants respectfully request that the objections to Claims 2-3 and 6-7 be withdrawn.

### **Section 112 Rejections**

The *Office Action* rejects Claims 1-3 and 5-7 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. With regard to Claims 1 and 5, the Examiner maintains that the terms non-compound data structure and compound data structure are not sufficiently explained in the Specification. The Examiner also states that "it is unclear as to how a directory child object having an attribute representing each field is provided for each value." (*Office Action*, page 3). Without conceding the veracity of these rejections, Applicants have made clarifying amendments to independent Claims 1 and 5 to address the issues identified by the Examiner. For at least these reasons, Applicants respectfully request that the rejection of Claims 1-3 and 5-7 under 35 U.S.C. § 112, first paragraph, be withdrawn.

The *Office Action* rejects Claims 1-8 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner maintains that the terms "non-

compound data structure” and “value”, as recited in Claims 1 and 5, are ambiguous. (*Office Action*, page 4). Without conceding the veracity of these rejections, Applicants have made clarifying amendments to independent Claims 1 and 5 to address the issues identified by the Examiner.

With regard to Claims 4 and 8, the Examiner states that “the term ‘that portion’ is unclear and indefinite.” (*Office Action*, page 4). The Examiner also states that “there is no step of actually determining a one-to-one relationship” and that there is insufficient antecedent basis for the term “the hierarchy.” (*Office Action*, page 4). Without conceding the veracity of these rejections, Applicants have made clarifying amendments to independent Claims 4 and 8 to address the issues identified by the Examiner.

The Examiner further states with regard to Claims 4 and 8 that “the specification teaches flattening by moving contents into a parent portion and not a child portion (paragraph 134 of the PG-Pub).” (*Office Action*, page 4). While the cited portion of Applicants’ Specification does indeed disclose that “[p]referably, the contents of the Relationship Object are promoted to the Parent” (*Specification*, paragraph 134), the cited portion is only one example embodiment of “flattening/merging.” With regard to Figures 16 and 17, the Specification states that a “child object can be promoted” such that “[t]he Parent Object 171 has contents A1, A2, An and has one or more children, Child Object 9n, with contents B1, B2, Bn, C1, C2 and Cn.” (*Specification*, paragraph 137). Thus, Applicants Specification clearly discloses that an object can be promoted to a child object. Applicants’ amended claim language reciting that “moving a content of the second object into a third object, the third object comprising a child object of the first object” is not indefinite.

For at least these reasons, Applicants respectfully request that these rejections under 35 U.S.C. §112 be withdrawn and the claims allowed.

### **Section 101 Rejections**

The *Office Action* rejects Claims 1-4 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. (*Office Action*, page 5).

In determining whether a process is patent eligible under 35 U.S.C. § 101, the Supreme Court has articulated (and the United States Court of Appeals for the Federal Circuit has recently affirmed) the “machine-or-transformation test.” *Benson*, 409 U.S. at 70; *see also In re Bilski*, No. 08/833,892, 2008 WL 4757110, at \*11, (Fed. Cir. October 30, 2008). Under

the “machine-or-transformation test” a claim directed to a method is patent eligible if the claim either “is tied to a particular machine” or “transforms an article into a different state or thing.” *See* Bilski, 2008 WL 4757110 at \*11 (*citing* *Benson*, 409 U.S. at 70).

Independent Claim 1, as amended, is directed to a method for use in a Web Services system that includes “providing a database for storing at least one directory parent object within a first object class.” Claim 1 also recites “using a processor in communication with the database to create a first directory child object for storing a first value associated with the repeating attribute, the first directory child object also within the first object class.” As another example, Claim 4 recites “providing a database for storing a plurality of UDDI objects.” Claim 4 also recites “using a processor in communication with the database to determine that a portion of a hierarchical structure or relationship in the Web Services arrangement has a ‘one-to-one’ relationship between first and second objects” and “using the processor to remove the portion of the hierarchical structure or relationship determined to have the ‘one-to-one’ relationship by moving a content of the second object into a third object, the third object comprising a child object of the first object.” Thus, at least the emphasized language of Claims 1 and 4 make clear that the methods recited in Claims 1 and 4 are tied to computing systems. Because a database and a processor are hardware and, thus, constitute a “machine,” the methods of Claims 1 and 4 are each “tied to a particular machine.” Therefore, the method recited in Claims 1 and 4 constitute statutory subject matter under 35 U.S.C. § 101 according to the applicable case law.

For at least these reasons, Applicants respectfully request that these rejections under 35 U.S.C. §101 be withdrawn and the claims allowed.

### **Section 102 Rejections**

The Office Action rejects Claims 1-3 and 5-7 under 35 U.S.C. §102(e) as being anticipated by both U.S. Patent Application Publication No. 2004/0039738 issued to Cutlip (“*Cutlip*”) and U.S. Patent Application Publication No. 2004/0002955 issued to Gadbois et al. (“*Gadbois*”). Applicants respectfully request reconsideration for the reasons discussed below.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis

added); M.P.E.P. ch. 2131. “The *identical invention* must be shown in as *complete detail as contained* in the . . . claim .” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989) (emphasis added); see also M.P.E.P. ch. 2131. In addition, “[t]he elements must be arranged as required by the claim.” Richardson v. Suzuki Motor Co., 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989); In re Bond, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990); M.P.E.P. ch. 2131.

The Federal Circuit recently clarified this standard in *Net Moneyin, Inc. v. Verisign, Inc.*, 2008 WL 4614511 (Fed. Cir. 2008). In *Net Moneyin*, the Federal Circuit held that a finding of anticipation under 35 U.S.C. § 102 is proper only when a “reference discloses within the four corners of the document not only all of the limitations claimed but also *all of the limitations arranged or combined in the same way* as recited in the claim.” *Net Moneyin* at \*10 (emphasis added). The prior art reference must “*clearly and unequivocally* disclose the claimed invention . . . *without any need for picking, choosing, and combining various disclosures not directly related to each other by* the teachings of the cited reference.” *Id.* (emphasis added, internal typographical notations omitted).

Independent Claim 1 of the present Application, as amended, recites:

A method for use in a Web Services system having complex UDDI object(s), the method comprising:

providing a database for storing at least one directory parent object within a first object class, the at least one directory parent object including a plurality of attributes, the at least one directory parent object comprising a repeating attribute that occurs more than once in the at least one directory parent object;

using a processor in communication with the database to create a first directory child object for storing a first value associated with the repeating attribute, the first directory child object also within the first object class; and

storing, in the database, the value associated with the repeating attribute in the first directory child object within the first object class.

Neither *Cutlip* nor *Gadbois* disclose, either expressly or inherently, each and every element of the claims.

For example, the proposed *Cutlip* does not disclose, teach, or suggest “storing at least one directory parent object within a first object class, the at least one directory parent object including a plurality of attributes, the at least one directory parent object comprising a repeating attribute that occurs more than once in the at least one directory parent object” and

“using a processor in communication with the database to create a first directory child object for storing a first value associated with the repeating attribute, the child object also within the first object class,” as recited in Claim 1. Rather, *Cutlip* merely discloses that a “UDDI registry specification defines several core data type structures, including “businessEntity”, “businessService”, “bindingTemplate”, and “tModel.”” (*Cutlip*, Page 3, paragraph 40). “A particular businessEntity instance may offer (i.e., publish) a number of business services in the registry, where each service is identified using an instance of the businessService data type 210.” (*Cutlip*, Page 3, paragraph 40). “Each businessService instance [210] has an instance of bindingTemplate data type 220” and that “[a]n instance of bindingTemplate may reference on or more instances of tModel data type 230.” (*Cutlip*, Page 3, paragraph 40). Thus, *Cutlip* discloses a hierarchical arrangement such as that illustrated in Figure 2) that includes businessEntity, businessService, binding Template, and tModel arranged under a businessEntity. Figure 3 “is a Unified Modeling Language (“UML”) diagram” providing “a precise [textual] description of the relationship between” these items. (*Cutlip*, Page 3, paragraph 42). For example, “BusinessEntity 320 has a list of URLs that may be used to provide more information . . . ; a list of company contacts 310; and a list of registered business services 330 offered by the company.” (*Cutlip*, Page 3, paragraph 42). There is no disclosure in *Cutlip* that the businessEntity or any other object includes “a repeating attribute that occurs more than once in the at least one directory parent objects,” as recited in Claim 1. Additionally, there is no disclosure in *Cutlip* of “using a processor in communication with the database to create a first directory child object for storing a first value associated with the repeating attribute,” as recited in Claim 1. Further, there is no disclosure that that the parent and child objects are both within the first object class.

*Gadbois* also does not disclose the recited claim elements. While *Gadbois* discloses a UDDI registry, *Gadbois* merely discloses that a root node “is maintained by the host system . . . and is represented by a Host node 210.” (*Gadbois*, Page 2, paragraphs 21 and 27). “A first tier or set of interior nodes coupled to the host node include a set of nodes representative of organizations.” (*Gadbois*, Page 3, paragraph 27). “For example, an Organization1 is represented at node 22, and Organization2 is represented at node 224.” (*Gadbois*, page 3, paragraph 27). “Each organization node is typically coupled to a number of interior sub-nodes which contain further information, or links to further information, regarding the respective organization.” (*Gadbois*, page 3, paragraph 28). Thus, *Gadbois* merely discloses

a hierarchical structure in which each organization is represented by a node and includes sub-nodes for further information. There is no disclosure in *Gadbois* that an organization node (or any other node) includes “a repeating attribute that occurs more than once in the at least one directory parent objects,” as recited in Claim 1. Additionally, there is no disclosure in *Cutlip* of “using a processor in communication with the database to create a first directory child object for storing a first value associated with the repeating attribute,” as recited in Claim 1. Further, there is no disclosure that that the parent and child objects are both within the first object class.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claim 1, together with Claims 2-3 that depend on Claim 1. For analogous reasons, Applicants respectfully request reconsideration and allowance of independent Claim 5, together with Claims 6-7 that depend on Claim 5.

### **Section 103 Rejections**

The Office Action rejects Claims 1-3 and 5-7 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,834,286 issued to Srinivasan et al. (“*Srinivasan*”) in view of *Gadbois*. Because neither *Srinivasan* nor *Gadbois*, alone or in combination, disclose, teach, or suggest the elements in Applicants’ claims, Applicants respectfully request reconsideration.

For example, Applicants have shown above that *Gadbois* does not disclose, teach, or suggest “storing at least one directory parent object within a first object class, the at least one directory parent object including a plurality of attributes, the at least one directory parent object comprising a repeating attribute that occurs more than once in the at least one directory parent object” and “using a processor in communication with the database to create a first directory child object for storing a first value associated with the repeating attribute, the child object also within the first object class,” as recited in Claim 1. *Srinivasan*, which is relied upon as the primary reference, also does not disclose the recited claim elements.

*Srinivasan* discloses “an example of a hierarchical tree of directory entities.” (*Srinivasan*, Column 1, lines 66-67). Specifically, *Srinivasan* discloses an entry of the “organization” object class at the top most level. Three child entries (97, 98, and 99) are objects of object class “Department” each having attributes “Dept. Name” and “State.” (*Srinivasan*, Column 1, line 67 through Column 2, line 13). However, while *Srinivasan*

discloses parent and child object classes, there is no disclosure that “the at least one directory parent object compris[es] a repeating attribute that occurs more than once in the at least one directory parent object. Likewise, there is no disclosure of “using a processor in communication with the database to create a first directory child object for storing a first value associated with the repeating attribute, the child object also within the first object class,” as recited in Claim 1. Certainly, there is no disclosure that the parent and child objects are both within the first object class.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claim 1, together with Claims 2-3 that depend on Claim 1. For analogous reasons, Applicants respectfully request reconsideration and allowance of independent Claim 5, together with Claims 6-7 that depend on Claim 5.

The Office Action rejects Claims 4 and 8 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,956,499 issued to Colgan (“*Colgan*”) in view of *Gadbois*. Additionally or alternatively, the Examiner rejects Claims 4 and 8 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2006/0059107 issued to Elmore et al. (“*Elmore*”) in view of *Colgan*. Because neither the proposed *Colgan-Gadbois* combination nor the proposed *Elmore-Colgan* combination disclose, teach, or suggest the elements in Applicants’ claims, Applicants respectfully request reconsideration.

For example, neither of the proposed *Colgan-Gadbois* and *Elmore-Colgan* combinations disclose, teach, or suggest “using the processor to remove the portion of the hierarchical structure or relationship determined to have the ‘one-to-one’ relationship by moving a content of the second object into a third object, each of the second and third objects comprising a child object of the first object,” as recited in Applicants’ amended Claim 4. With regard to both combinations of references, the Examiner relies upon *Colgan* for disclosure of removing a portion of a hierarchy. (*Office Action*, pages 10-11). However, *Colgan* merely discloses a physical model that contains a large number of occurs type entities and proposes transferring an attribute of the occurs entity to the parent entity. (*Colgan*, Column 2, lines 47-48). Because *Colgan* discloses transferring from child to parent, *Colgan* does not disclose, teach, or suggest “using the processor to remove the portion of the hierarchical structure or relationship determined to have the ‘one-to-one’ relationship by moving a content of the second object into a third object, each of the second and third objects

comprising a child object of the first object,” as recited in Applicants’ amended Claim 4. Accordingly, Applicants’ Claim 4 is allowable over the proposed *Colgan-Gadbois* and *Elmore-Colgan* combinations.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 4 and 8.

**New Claims 9-20**

New Claims 9-20 have been added and each depend on one of independent Claims 1, 4, 5, and 8, which Applicants have shown above to be allowable. Claims 9-20 are patentable at least because of their respective dependencies and further because they recite additional features not disclosed, taught, or suggested in the prior art. For example, Claims 10 and 12 recite that "the second object is a relationship object." As another example, Claims 13 and 17 recite “creating a searchable index of the first value associated with the repeating attribute.” At least these combinations of features are not disclosed, taught, or suggested in the prior art of record. Accordingly, Applicants respectfully request consideration and allowance of new Claims 9-20.



**CONCLUSION**

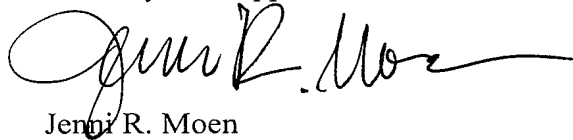
Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other apparent reasons, Applicants respectfully request full allowance of all pending Claims.

If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicants stands ready to conduct such a conference at the convenience of the Examiner.

Applicants believe no fee is due. However, should there be a fee discrepancy, the Commissioner is hereby authorized to charge any required fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.  
Attorneys for Applicants

A handwritten signature in black ink, appearing to read "Jenni R. Moen", with a long horizontal flourish extending to the right.

Jenni R. Moen  
Reg. No. 52,038  
Phone: (214) 415-4820

Date: May 19, 2009

**CORRESPONDENCE ADDRESS:**

Customer Number: **05073**